UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,941	11/14/2003	Yoshiaki Kaburagi	00862.023315	7416

5514 7590 08/25/2006

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
MARTIN, LAURA E	
ART UNIT	**PAPER NUMBER**
2853	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/706,941	KABURAGI, YOSHIAKI	
	Examiner	Art Unit	
	Laura E. Martin	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 5-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 6-8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayanagi (JP 09-226185) in view of Day et al. (US 6481905).

Takayanagi teaches a printing apparatus for performing printing on a printing medium by reciprocally scanning a carriage to which a printhead having a plurality of printing elements is mounted [0002], said apparatus comprising: a buffer storing print data to be used in a printing operation for one scan [0011]; counting means for counting at least a part of the print data, stored in said buffer, which causes the printhead to perform a printing operation during acceleration of the carriage [0011]; comparison means for comparing a counted value, counted by said counting means, with a predetermined threshold value [0014]; and control means for controlling to change a number of printing elements of the printhead to be used in a printing operation for one scan of the carriage, based on a comparison result of said comparison means [0013-0014] Takayanagi also teaches the counting means divides said buffer into a plurality of areas [0017], and among the divided plurality of areas, performs counting on an area storing print data to be used by the printhead [0011]; control means controls to perform

multipass printing [0012]; the printhead is an inkjet printhead which performs printing by discharging ink [0018]; the inkjet printhead comprises an electrothermal transducer for generating heat energy to be applied to ink, so as to discharge the ink utilizing the heat energy [0053].

Takayanagi does not teach printing being performed during acceleration, deceleration, and constant-speed movement of the carriage; a DC motor for driving the carriage; and a power source for supplying electric power to the printing apparatus.

Day et al. teaches printing being performed during acceleration, deceleration, and constant-speed movement of the carriage (column 5, lines 56-65); a DC motor for driving the carriage (column 5, lines 45-46); and a power source for supplying electric power to the printing apparatus (column 4, lines 15-18).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Takayanagi with the disclosure of Day et al. in order to create a smaller and more versatile printing apparatus.

Neither Takayangi nor Day et al. disclose the number of printing elements of the printhead to be used in a printing operation for one scan of the carriage, which is controlled by said control means, satisfies a condition such that a sum of a driving current supplied to the DC motor for accelerating the carriage is equal to or lower than a capacity of the power source; however, it would have been obvious to one of ordinary skill in the art at the time of the invention that it is inherent that in order to have a working motor, the total driving current must be equal to or lower than the printer capacity.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takayanagi (JP 09-226185) and Day et al. (US 6481905) in further view of Yanagisawa et al. (US 5690437).

Takayanagi and Day et al. teach the apparatus of claim 1; however, neither teaches determining means for determining whether or not the power source is an AC power source or a batter power source, and wherein in a case where it is determined by said determining means that the power source is a battery power source, controlling is performed by said control means.

Yanagisawa teaches determining means for determining whether or not the power source is an AC power source or a batter power source, and wherein in a case where it is determined by said determining means that the power source is a battery power source, controlling is performed by said control means (column 7, lines 30-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Takayanagi as modified with the disclosure of Yanagisawa in order to provide for a more versatile printer.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayanagi (JP 09-226185) and Day et al. (US 6481905) in further view of Anzai et al. (US 2003/0067507).

Takayanagi teaches a second predetermined threshold value in accordance with a moving direction of the carriage [0016]; however, neither Takayanagi or Day et al.

disclose acquisition means for acquiring data regarding power consumption of the DC motor during acceleration or deceleration of the carriage; and addition means for adding the data regarding power consumption of the DC motor acquired by said acquisition means to data regarding power consumption of the printhead which is obtained from a counted value counted by said counting means; wherein said comparison means compares a value, obtained by said addition means, with a predetermined second threshold value.

Anzai et al. teaches acquisition means for acquiring data regarding power consumption of the DC motor during acceleration or deceleration of the carriage; and addition means for adding the data regarding power consumption of the DC motor acquired by said acquisition means to data regarding power consumption of the printhead [0017] which is obtained from a counted value counted by said counting means [0044]; wherein said comparison means compares a value, obtained by said addition means, with a predetermined second threshold value [0017].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Takayanagi as modified with the disclosure of Anzai et al. to create a more durable printer.

Response to Arguments

Applicant's arguments filed 6/20/06 have been fully considered but they are not persuasive. Applicant argues that Takayanagi does not disclose a driving current supplied to a DC motor for accelerating the carriage; however, that is obvious that a DC

motor, must have a current in order for it to run. Day et al. discloses a DC motor, as well as a drive current in column 8, lines 11-25. As stated above, it would have been obvious to one of ordinary skill in the art at the time of the invention that the number of printing elements of the printhead to be used in a printing operation for one scan of the carriage, which is controlled by said control means, satisfies a condition such that a sum of a driving current supplied to the DC motor for accelerating the carriage is equal to or lower than a capacity of the power source, as it is inherent that in order to have a working motor, the total driving current must be equal to or lower than the printer capacity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

8/21/06
MANISH S. SHAH
PRIMARY EXAMINER